

## ABSTRACT

A programmable controller includes at least one user input interface, and an input register,  
at least one user output interface and an output register, programmable logic hardware and  
5 program loading means.

The user input interface and input register is for connection to process plant and/or machinery  
to provide sampled and stored input data in digital form. The user output interface and output  
register is for connection to process plant and/or machinery and receives and stores output data  
in digital form. The programmable logic hardware includes a plurality of basic logic elements  
10 and electrically configurable interconnections. The interconnections are configurable to  
interconnect the logic elements as a user control program circuit and to connect the user control  
program circuit to the input and output interfaces. The program loading means to enables the  
user to configure the programmable logic hardware as a circuit implementing a user control  
program prior to initiating control of the associated process plant and/or machinery.

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